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Biology vs. Sterilization

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SLIDES were thrown on the screen illustrating the theory of genetics based on the Mendelian law of "segregation" and the inter-play of "dominant" and "recessive" genes. Pictures illustrating the Neo-Mendelian transmission forms of "blending" and "mosaic" arrangement were also shown.

Let me say here that the great body of the defective characteristics that concern us in this discussion are due to "recessive" defective genes, *i. e.*, it requires two of these genes in the same pair to give the individual characteristic, so that a person may have one of such defective genes and be perfectly normal. A person that has defects in both genes of any pair that has to do with the formation of the brain, *e. g.*, will be "feeble-minded" but a person having only one such gene in the pair will be normal or perhaps superior.

The hope of eugenics is based on the possibility of eliminating from the race all the defective genes. Let us grant the eugenist the most favorable conditions, *viz.*, that all defective characteristics are due to defects in a single pair of genes and that these genes are in the same position in the chromosomes of both parents, and to simplify matters let us take the instance of so-called "feeble-mindedness"; then we can calculate mathematically the result of sterilization of all the feeble-minded persons in a nation. Such calcution has been made by R. A. Fisher, E. M. East, and R. C. Punnett. (Published in the *Journal of Heredity*, 1917 and 1927.) The result of the computation may be summarized in the words of H. S. Jennings—"if the proportion of feeble-minded in the population is one per thousand, to decrease that proportion to one per ten thousand will require about 68 generations, or two to three thousand years, if it is done merely by stopping the propagation of all feeble-minded individuals" ("Biological Basis of Human Nature"). This

meager result is due to the fact that in each generation the great bulk of the feeble-minded come not from the mating of feeble-minded persons but from the "carriers," *i.e* ., persons who are normal or even superior, but carry in their chromosomes a single defective gene which, when mated with a similar gene from another "carrier," will give rise to a feeble-minded individual. Moreover, these physically well-marked cases of feeble-mindedness which transmit their defective genes by this simple "single pair" method play very little part in the propagation of defectives for the obvious reason that they are prevented from doing so by natural, family, and State influences. In this, at best, very limited group of defectives, with a granted theoretically over-simplified mode of inheritance, the only hope for the eugenist, then, lies in the possibility of stopping the propagation of the carriers. But we have seen that with our present knowledge there is no way of detecting this group, as they are normal, or even superior, in their phenotypical characteristics.

But there are all grades of feeble-mindedness, and, furthermore, the mental defects may be compensated for by accompanying characteristics either good, such as "ambition," or bad, such as envy, greed, inferiority complexes, etc., so that the individual may succeed in passing as a leading useful citizen. The eugenist fails to realize that the genes are not dead material bricks in a building, but living units, each reacting with its neighbors, and all reacting together in an organized living totality. From such a group who is to pick out the members due for sterilization? There certainly would be considerable difference of opinion and it is quite possible that so many eugenists would be elected that the whole eugenic movement would be stopped.

A still heavier blow to eugenics comes from the fact that the great body of defectives that trouble society do not propagate by this simple "same-pair gene defect" method, but by the method of "diverse genes." One outstanding fallacy of the theory of eugenics is the view that each individual characteristic has its corresponding specific gene. The truth is that each individual characteristic, such as the color of the eye, has hundreds and probably thousands of genes contributing to its make-up which are located in different places in the gene map. For example, in the fruit fly, 150 genes located in different positions in the X chromosome have

been found, any one of which, when defective, will cause a difference in the color of the eye. An illustration of this diverse arrangement of defective genes is shown. Here are two parents, both of whom are feeble-minded, but their defective genes are in different positions, those of the father in the second pair while those of the mother are in the fourth. The children, as you see, are all normal or may be superior, but they are all carriers. I have recently seen a very superior individual whose parents were both typical cases of well-marked feeble-mindedness. The more closely related the parents, the more likely are their defective genes to be in the same pair, and the more distant the relation the more likely are they to be in diverse pairs. The Church has always recognized this fundamental biologic law and has prohibited intermarriage between those of close blood-relationship.

The above-discussed sharply defined pathological traits, *viz.*, feeble-mindedness, insanity, etc., form only a very small part of the social incompatibilities and maladjustments which constitute the difficulties in the way of ideal organization of society. The chief problem has to do with the dependents, the delinquents and all grades of criminals. In his proposed dealings with these, the eugenist exhibits another fundamental biological fallacy, *viz.*, in regarding the inherited genes as independent entities. A gene is not "something that gives rise to a unit characteristic" but "something that in a given environment gives rise to a certain characteristic." The interdependence of gene and environment is similar to that between the positive and negative poles of a magnet. It is only at the extreme ends that genes and environment take on a semblance of independence. In the great majority of cases the genes are "pliable" and result in characteristics which are determined by the environment as much as by their own constitution. And this quality of the genes is fundamental. Emerson found varieties of maize growing in the fields some of which are red and some green. If the red and green are crossed, the inheritance is Mendelian, which shows that the difference is due to genes. But if the red varieties are grown without sunlight, they are green, so the difference is due to environment. Such differences have also been shown to be due to differences in food, temperature, humidity, dryness, etc. An anomaly is shown in the fruit

fly, which sometimes arises spontaneously when bred in its natural environment, which includes a moist atmosphere. It breeds true to Mendel's law and, hence, the anomaly is due to defective genes. But breed the fruit fly in a dry atmosphere and they return to normal. Hence the change is due to environment. Many such cases could be enumerated. So it is in the great group of human beings which we are now considering. It is a moral certainty, says Professor Woodruff of Yale, that if the infants Darwin and Lincoln—which, by the way, were born on the same day—had been exchanged by their mothers, we should not have heard of either of them. In the case of our over-numerous young American criminals we are dealing with a make-up of such "pliable" genes—(young people "easily led")—which in an environment of poverty with consequent loss of opportunity, bad home surroundings, materialistic education, lack of moral and, above all, of religious training, give rise to all grades of defectives—dependents, delinquents, and all grades of criminals, whereas the same genes in an entirely different, wholesome environment would develop the characteristics of the ideal, model citizen. It seems a fundamental law of human nature that in dealing with such questions there are always men who can see only the extremes—in this case the eugenists at one end and the Watsonian behaviorists at the other. Only in the Aristotelian and scholastic principle of the "happy mean" do we find the solution.

In conclusion, we may say that the ideal of eugenics is a worthy one, but that the measures so far proposed for its accomplishment are impracticable, even when they are not immoral. Even if we could by means of some happy discovery detect all the hidden defective genes in the race, and by some other happy method get rid of them all, we have abundant evidence that they are being manufactured in normal individuals perhaps as fast as we could possibly get rid of them.

Finally, in recent years we see intimations of even more serious difficulty in the way of practical eugenics and this is concerned with the great differences of opinions which may arise not with regard to defective genes but as to the value of the individual characteristics themselves. Just what is the "good" man and who are the "undesirables"? The widespread movement in the world today aimed at uproot-

ing and destroying our established institutions and traditions is only too evident, and to the extent that it succeeds will there be a chaos of opinions on this question. With such uncertainty as to what the ideal is, no radical eugenic measures could be attempted.

Whither Science?

H. V. GILL

Reprinted from the Month *(London), February, 1934.*

THE *Month* has already, in some admirable articles by Mr. Reginald J. Dingle,[1] given Catholic readers timely warning against the danger of assuming too readily that the attack on materialistic determinism, delivered so vigorously by Sir Arthur Eddington and Sir James Jeans in recent years, should be hailed as a service to the doctrine of free-will. Catholic philosophers may be trusted to be on their guard against the gifts of such Greeks, which still continue to be proffered, but even they will welcome an auxiliary of the weight and quality of Max Planck, who has lately entered the lists on their side. Popular books like those of Jeans and Eddington need an authoritative corrective, for the credit of great names is not easily gainsaid, and it is only by invoking the witness of someone of equal or greater standing that the dangerous tendencies of their writing can be effectively withstood. It is, therefore, a matter for considerable satisfaction that one is able to call in aid Professor Max Planck's latest work,[2] which is now accessible in English and which should certainly be read by those who have been puzzled by the modern English school of mathematical philosophers.

It need hardly be said that Max Planck is the great German scientist whose "Quantum Theory" has revolutionized physics,[3] for it has been so definitely confirmed by all recent

1See "What of the New Physics?", January, 1931; "Science and Causality," September, 1932.

2"Where is Science going?", by Max Planck, with a Preface by Albert Einstein. Translated and edited by James Murphy. London: George Allen & Unwin. 1933.

3Towards the end of the last century, and in the beginning of this, difficulties arose which could not be met by the ordinary laws of the wave theory of light. In order to solve them Planck advanced the view that light energy was

work that it is now a received "law of nature." In all branches of physics Max Planck has distinguished himself, so that today, in his seventy-sixth year, he is one of the leading physicists in Europe. The reasoned words of such an authority must, therefore, have very great weight with those who wish to see modern science in its true perspective, and we need no further warrant for calling attention to them.

The main object of Professor Planck's book is to protest against what he considers the unwarranted conclusions to which mathematicians of the school referred to have given expression in their interpretation of recent physical discoveries. The two subjects dealt with are, firstly, the denial of the principle of strict causation in nature, and, secondly, tendencies to deny the existence of a material world independent of human thought. These aberrations interest Planck very strongly, because both are claimed to have arisen out of the application of the quantum theory to electronic physics. It is not possible to deal with the matter in detail in the present article. It will be enough to remember that modern theories are, to a great extent, based on Heisenberg's Principle of Indeterminancy, which amounts to the statement that, while we may observe *either* the position *or* velocity of a fast-moving electron, we cannot simultaneously observe both. A little thought will make it clear that a similar restriction applies to every observation of velocity. It requires *two* observations of positions at intervals of time "infinitely" near, to arrive experimentally at any exact velocity. And, of course, such conditions can never be realized in practice. One of the peculiarities, we may note, of modern scientific philosophers is a tendency to arrive at new and startling conclusions which are fundamentally as old as the hills!

Eddington arrives at the conclusion that a consequence of this principle of indeterminancy is that strict causation is no longer to be looked on as a law of nature—at least of "microscopic" nature. In a Lecture given to the British Institute

transmitted in small indivisible units each unit being a multiple of a certain amount or "quantum"—called after him "Planck's constant." Einstein's contribution was to assert that the energy of each "photon" or light-quantum could be expressed by $h\nu$, where h is Planck's constant, and ν the frequency of the light as measured by the spectroscope. The surprising way in which this theory has been found to agree with experiment is one of the triumphs of intuition. Thus, the present state of the theory of light is that there is one set of phenomena which can be fairly well explained on the wave theory, but which seem incompatible with the quantum theory, and another which can be explained with reasonable accuracy by the quantum theory, but not at all by the wave theory. Much of the ingenuity of modern physics has gone to reconcile these contradictions.

of Philosophy, November 15, 1932, "Physics and Philosophy," Sir Arthur Eddington said:

> All the primary or deterministic laws have disappeared. I shall not go into details here, since I have already written on the subject more than once. The conclusion can be stated simply (italics his):
> *The result of our analysis of physical phenomena up to the present is that we have nowhere found any evidence of the existence of deterministic law.*[4]

A general criticsm of the view thus adopted might be that a great deal of trouble has been taken to overcome foes whose fewness makes them negligible. It is clear that the absolute and strict determinists whom Eddington attacks have never really existed. Such determinists as Newton and the rest did not suppose that nature was a mere machine, but that it was governed by a directive Power, ordaining its operations to determined ends. Nor has it ever been denied by advocates of nature's uniformity that in the ordinary course of human affairs there is always present an element of uncertainty, arising out of our want of knowledge of all the "unknowns" which may be involved in any event. But in spite of this uncertainty, our confidence in the continuity of the laws of nature is such that we apply the laws of cause and effect with usfficient confidence even in extreme cases.

But, as Mr. Dingle points out in the articles referred to, it is a more dangerous application of this principle of indeterminancy to extend it to the workings of the human mind and will, and to attempt to justify the doctrine of the freedom of the will from the "undetermined" action of atoms and electrons. In the address referred to, Sir Arthur Eddington says: "The new physics thus opens the door to indeterminancy in mental phenomena, whereas the old deterministic physics bolted and barred it completely. . . If the atom has indeterminancy, surely the human mind will have an equal indeterminancy; for we can hardly accept a theory which makes out the mind to be more mechanistic than the atom." It is, of course, evident that such an application does not touch the freedom of the will at all. It would only go to show that will does not determine itself, but is as capricious and uncertain in its actions as is the atom conceived mathematically.

[4]See *Philosophy*, January, 1933, p. 38. Cf. also his Presidential Address to the Mathematical Association, January 4, 1932, on the Decline of Determinism, see *Nature*, February 13, 1932.

Planck states the position thus:

> And so when Heisenberg proclaimed his Principle of Indeterminancy it was almost immediately interpreted, even among physicists themselves, as definitely effecting an overthrow of the causation principle. As a matter of fact, we have no means whatever of proving or disproving the existence of causation in the external world of nature. And the aim which Heisenberg had before his mind in formulating the Principle of Indeterminancy was to find a rule whereby we can deal with minute processes in natural phenomena, such as those in which the elementary quantum of action is involved. Here the causal principle is not applicable. That is to say, we cannot estimate simultaneously both the velocity and the position in time-space of a particle, and say where it will be a moment hence. But this does not mean that the causal sequence is not actually verified objectively. It means that we cannot detect its operation; because, as things stand today, our research instruments and our mental equipment are not adequate to the task. The Principle of Indeterminancy is, in reality, an alternative working hypothesis which takes the place of the strictly causal method in quantum-physics. But Heisenberg himself would be the first to protest against the idea of interpreting his Principle of Indeterminancy as tantamount to the denial of the principle of causation (p. 32).

The logical objection to the principle of causation is that we cannot strictly conclude from any result that, on repeating the series of steps which led up to it, we shall obtain the same result. Logically it is a matter of extreme probability, but never of metaphysical certainty, for there may be involved some unknown factor which, hitherto, has not intervened. Eddington says that my conclusion that a pot of water set on a fire will ultimately boil is only a matter of probability, although, of course, the chances of its becoming cold instead of hot are so slight that they may be neglected. The supporter of the strict law af causation would reply that this did not touch the question at all; that a being who knew all about the factors involved could say with absolute certainty what would happen, but that no man could ever uphold strict causation, not because of its intrinsic impossibility, but because of the imperfection of our knowledge. Accordingly, the mathematicians would seem to be making a good deal of fuss in advancing what no one has ever denied, *viz.*, that the principle of causation cannot be proved by experiment. One thing is certain, that all orderly scientific progress has been founded on the assumption of the truth of the principle of causation understood in a commonsense fashion. The position taken up by Sir James Jeans

is perhaps more guarded, though he, too, thinks it necessary to imply the failure of "strict causality": "Whether determinism has also been banished from nature is still a queston for debate. We shall see later that the answer is probably something more subtle than a mere 'Yes' or 'No'; possibly we could make either answer true by suitable definitions of determinism and nature. But that these particular cases which seemed until recently to compel determinism have gone—this is hardly open to question."[5]

Before leaving this part of our subject it will be well to give Planck's own view on the matter:

> And here I must definitely declare my own belief that the assumption of a strict dynamic causality is to be preferred, simply because a dynamically law-governed universe is of wider and deeper application than the merely statistical idea, which starts off by restricting the range of discovery; because in statistical physics there are only such laws as refer to groups of events. The single events, as such, are introduced and recognized expressly; but the question of their law-governed sequence is declared senseless on *a priori* grounds. That way of procedure appears to me to be highly unsatisfactory. And I have not been able to find the slightest reason, up to now, which would force us to give up the assumption of a strictly law-governed universe, whether it is a matter of trying to discover the nature of the physical, or the spiritual forces around us (p. 100).

He goes on to show that the application of the Principle of Indeterminism to the question of free will "would be to reduce the human will to an organ which would be subject to the sway of mere blind chance." His lengthy treatment of this subject will repay a careful consideration.

The other question, that of the reality of a material world distinct from mind, is a difficult one and involves the application of metaphysical principles. Like the principle of causality it cannot be directly solved by experimental observation or by mere logic. Intuition—or, as Planck would say, faith—plays a large part in acquiring conviction as to the reality of the external world. Progress in any experimental science is impossible without speculation, imagination, generalization, and the application of other mental processes. The fatal error of the Positivists, whose doctrines Planck asails, is to limit science to a mere cataloguing of facts of observation. Every true scientist puts before himself the ideal of acquiring as fundamental a knowledge as

[5] "The New Background of Science," by Sir James Jeans, F.R.S., etc. (Cambridge: 1933), p. 44.

possible of nature from its manifestations as perceived through the senses. He knows that such an ideal will never be reached, and that each step in knowledge involves new problems, each more involved and difficult than the last. The ordinary person is satisfied with a general knowledge of the properties of water. The chemist splits it up into hydrogen and oxygen. Then the physicist discovers that hydrogen is made up of protons and electrons, and attempts to discover the nature of an electron. Thus each step gives rise to new problems ever increasing in number and difficulty. The physicist does not suppose for an instant that the electron is the "ultimate reality," or that, when he has analyzed it into, perhaps, neutrons and something else, he will have reached the limits of knowledge.

The mathematician follows on the path of the experimentalist and attempting to express in mathematical formulae the relations which experiment has discovered, finds that he has to resort to what Eddington calls "dodges" which introduce concepts which have no counterpart in nature as we know it, such as "waves of probability" and the rest, and electrons as entities without any individuality. Living in imaginary regions of this kind prepares the mind for the idealism towards which some of our mathematical philosophers seem to be drifting, and which is in reality a confession of defeat. Or it may be that they are attempting something beyond the power of the human intellect—to find a formula which will give a general solution of the nature of "reality." It would be impossible to trace here the steps which have led towards this idealistic mentality. It is enough for our purpose to call attention to its existence. It is, however, well to keep in mind that the writers in question rather hint at the desirability of adopting the principles of idealism than assert it in so many words. Sir J. Jeans, for example, thus concludes "The New Background of Science":

> Thus, subject to the restrictions already mentioned (the existence of one or many minds), we may say that the present-day science is favourable to idealism. In brief, idealism has always maintained that, as the beginning of the road by which we explore nature is mental, the chances are that the end also will be mental. To this present-day science adds that, at the furthest point she has so far reached, much, and possibly all, that was not mental has disappeared, and nothing new has come in that is not mental. Yet who shall say what we may find awaiting us around the next corner?

Against this and similar views Max Planck protests vigorously in his book. He strongly supports the traditional, "common sense" conviction that there definitely exists a real world, or material universe, which is altogether independent of our minds. This universe manifests itself to us through our senses, with sufficient clearness for our material and intellectual needs. It is evident that the senses by themselves can only tell us about what we may call "the outside of nature," which, however, by mental processes, enables us to arrive at some notion of the hidden reality beneath them. Planck takes his stand midway between idealism and positivism. According to him the two cardinal theorems on which all physical science depends are "(1) A real outer world which exists independently of our act of knowing; (2) The real outer world not directly knowable." The real aim of science is to interpret the exact observation of sensible phenomena, that is to say, *measurements*. In chapter iii the scientist's picture of the physical universe is described: "The chief quality to be looked for in the physicist's world-picture must be the closest possible accord between the real world and the world of sensory experience." He holds that this is impossible unless we "assume that the physical universe is governed by some system of laws which can be understood, even though he cannot hold out to himself the prospect of being able to understand them in a comprehensive way or discover their character and manner of operation with anything like a full degree of certitude."

The views of Planck and Einstein on the subjects treated in the book are well brought out in an Epilogue, which is a Socratic Dialogue between Einstein, Planck and James Murphy, the Translator and Editor of the English Edition. Planck cites Einstein as agreeing with him that you could not be a scientist "if you did not know that the external world existed in reality." This knowledge is not to be gained by any process of reasoning. "It is a direct perception, and, therefore, in its nature, akin to what we call Faith. It is a metaphysical belief." This view is dealt with in detail in the chapter on the "Answer of Science."

In the Dialogue Einstein speaks out pretty frankly concerning these popular works which have had such enormous circulations in England. Many must have wondered that there are so many at all capable of reading them with any

degree of understanding, because they are concerned with very abstract theories which are altogether remote from the thoughts of even educated people. One explanation is that these writers have the dangerous gift of attractive style which tends to delude the casual reader with the feeling that he grasps the meaning of what he reads. Another explanation may be that there is in them so little definitely stated, clearly and without all sorts of qualifying clauses, that the illogical outlook of the average reader is confirmed in the tendency towards compromise which is characteristic of the modern English outlook on life. Other causes may conspire to make these books "best sellers." Einstein appears to look on these books as a display of literary style:

> You must distinguish between the physicist and the *litterateur*, when both professions are combined into one. In England you have a great English literature and a great discipline of style. . . . What I mean is that there are scientific writers in England who are illogical and romantic in their popular books, but in their scientific work they are acute logical reasoners.

Murphy points out that the British Press represents Einstein as subscribing to the theory that the outer world is a derivative of consciousness, and refers to Joad's "Philosophical Aspects of Science" in which he mentions Einstein's name as corroborating the theories of Sir Arthur Eddington and Sir James Jeans. Einstein replies to this in the following words:

> No physicist believes that. Otherwise he would not be a physicist. Neither do the physicists you have mentioned. You must distinguish between what is a literary fashion and what is scientific pronouncement. These men are genuine scientists and their literary formulations must not be taken as expressive of their scientific convictions. Why should anyone go to the trouble of gazing at the stars if he did not believe that the stars are really there? Here I am entirely at one with Planck. We cannot logically prove the existence of the external world, any more than you can logically prove that I am talking with you now or that I am here. But you know that I am here and no subjective idealist can persuade you to the contrary.

The Vocation of the Catholic Poet

St. John A. Crealy

Reprinted from the Irish Rosary *(Dublin), February, 1934.*

WHAT do we Catholics seek in poetry? Think it out and you will agree that we seek the æsthetic side of our religion, we seek the dogmas we profess, the truths we love, but we want them haloed in beauty, made live for us again in books by the charm of poetry. But then, most of us are not very keen on poetry, and for this perhaps we are not altogether to blame. When we come to think of it now, much of the poetry to which we were introduced in our schooldays answered no special needs of our minds. Large sections of our anthologies could scarcely be adjusted to our religious outlook which is also our complete world outlook, our certain unchangeable philosophy of life. Happily the vagueness of Wordsworth in many places admitted of a wide interpretation, but then there was Shelley with *Queen Mab*. Very powerful, no doubt, great poetry perhaps, but rather blasphemous we thought, and personally we do not like blasphemy however artistically expressed. About other pieces there was the feeling that it was rather a pity to expend such rich emotion, such glowing fancy, and, as one beginner said, such *fine words* on such paltry themes. Of course if you see no particular reason why one thing should be true rather than another then this vague and picturesque pantheism is attractive, while the lamentations of Swinburne over a ruined Pantheon or of Yeates over our vanished fairy-folk may be ranked as great literature. The Catholic, however, can scarcely feel much enriched by these effusions. He can scarcely consider himself as getting nearer to reality or enlightened very much on his nature, his place in the universe, his future destiny. He looks to poetry for something more. The far-flung horizons of the Faith deepen that thirst which belongs to man's immortality and make the Catholic, more than others, long to attain in poetry a portion of that loveliness whose very elements appertain to eternity alone. For the satisfying of this thirst, as far as may be, he must look to Catholic poetry.

Every poet is to some extent a philosopher. But the Catholic poet has a definite advantage over those outside the fold in that he has ready to hand a consistent philosophy of

life. He can, therefore, take all human experience as his kingdom, range through all knowledge and all human activity, judging all by the touchstone of his Faith. In this way the beautiful will in his workmanship be wedded to the true, and from creatures he will rise to the Creator, recognizing in Him the beauty of which the world is a symbol and the truth of which it is an expression.

And this takes us at once to a view of nature which is essentially Catholic. It is also an inexhaustible, and we may add, an unworked mine of poetry. This view is, perhaps, best expressed in the words of the Psalmist:

> O Lord! how admirable is Thy Name in the whole earth.

The whole world is an alphabet that spells the name GOD. "Day unto day uttereth speech and night unto night showeth knowledge. There are no tongues or languages in which their voices are not heard." For in God's design the entire universe is a sacrament of Himself. All nature is meant to tell man what it told to Augustine:—"God made us and not we ourselves." All natural beauty is a sign of the unimaginable beauty that lies beyond it. Its loveliness is but a faint token of the supernal loveliness out of which it came. "The skies show forth the glory of God, and the firmament proclaims the work of His hands."

God meant nature to be all this to us. He meant it to be a majestic theophany through which flows to our ears echoes of the harmonies of eternity. The Catholic poet is conscious of this. Still he cannot be blind to the fact that on most of us in the humdrum of everyday life the great harmony is lost. Sadder still, must he not admit that only too often nature is rather an obstacle on our way to God. Witness Thompson seeking shelter from that "tremendous Lover":

> Come then, ye other children, nature's,
> Share with me, said I, your delicate fellowship
> . . . . . .
> With thy young skyey blossoms heap me over
> From this tremendous Lover.

At other times, deluded like the Pantheists we rest content with nature and fail to pass beyond. So Thompson again:

> 'Tis ye, 'tis your estranged faces
> That miss the many-splendoured thing.

And as Alfred Noyes puts it:

> Darkly as in a glass, our sight
> Still gropes through Time and Space.
> We cannot see the Light of Light
> With angels face to face.

The Catholic poet recognizes this as one of the lamentable consequences of the Fall, for which it is his vocation to supply a remedy, albeit a natural one. Indeed it is only grace which can supply an adequate remedy, making of us what Adam once had been. We see the result in the saints, in the Catholic mystics. They have no delusion above nature's purpose. For them all things are steeped in the Divinity. St. Francis had the mysterious secret and felt his kinship with the sun and the birds, with wind and fire—all were the creatures of God, and as all proceeded from His creative hand so all led back to Him. This journey of the human mind back to the Divine is the subject of a masterpiece[1] among the works of that other great Franciscan, the Seraphic Doctor. Olier in the *Journée Cretienne* gives expression in a wonderful passage to this characteristic attitude of the great mystics:

> O God I adore Thee in all Thy creatures, Thou the real and sole strength that bears this mighty world. Without Thee, nothing would be; nothing does subsist outside of Thee . . . All that I behold, O God, but reveals to me the mystery of Thy beauty unknown to mortal eyes . . . I adore the splendour of Thy majesty that outshines the noonday-sun a thousand times. I adore the fecundity of Thy power, more wonderful by far than that disclosed by the starry skies.

To inspire us who have not yet reached the supernatural perfection of the saints, to inspire us with a sense of reverence and of mystery, to beget in our minds a prescience of the nearness of the Divine, of the Unseen in the seen, this we take to be the vocation of the Catholic poet. Gifted beyond his fellows with this vision he can convey it to us by the magic of words. God has given him the eye that sees the spiritual latent in the things of sense, the reflection of an invisible order that binds all things in unity. It is his duty, then, to erect for his less fortunate brothers the Jacob's ladder that leads to the unseen, to act as a pontiff "that doth the crevasse bridge to the steep and trifid God." He must be in very deed the "chanter of pains and joys, uniter of here

[1] *Itinerarium Mentis ad Deum.*

and hereafter, taking all hints to use them but swiftly leaping beyond them." He must tell us how

> All nature is but art unknown to thee,
> All chance direction which thou canst not see.

All this lends to the Catholic poet a sense of power, of mastery and of fervor, and sets him on a summit from which he can view creation. It is as of old with the Hebrew poets. The opening words of *Genesis*, "In the beginning God created heaven and earth," ringing in the Hebrew ear raised Hebrew poetry at once and forever above the pettiness of Pagan poetry. We cannot deny the intense human appeal of the classics, but where is the glamour in the petty feuds of the gods? We admire the perfection of line, the matchless artistry of form and word, but look in vain for real sublimity, for that blend of metaphysics and poetry, of truth and beauty that we find in the Bible and in Christian song. If you want to see how a poet can stand outside the universe and "swing the earth a trinket at his wrist" you must read the poetry of the Old Testament. As an example we may quote Wisdom: "The whole world before thee is as the least grain in the balance and as a drop of the morning dew." And Isaias: "And the hosts of the heavens shall pine away and the heavens shall be folded together as a book; and all their host shall fall down as a leaf falleth from the vine and fig-tree." This coign of vantage over creation was never occupied by the Pagan or Pantheistic imagination. Pagans had no outlook which could dwarf the world to a dewdrop and cast aside the universe as a worn-out garment or fold it like a parchment roll. The Catholic imagination is emancipated from trivial cosmogonies and misty theories about an *anima mundi*, and should therefore enjoy an unrivaled mastery over the world of sense. Far below God it is true, but far above nature the Catholic poet, like his great Hebrew predecessors can play with time and space, take with the Psalmist "the wings of dawn and dwell in the uttermost seas," where still the right hand of God shall lead him and hold him, the hand which shut up the seas with doors, making a cloud the garment thereof and wrapping it up in swaddling bands, setting bounds around it and making it bars and doors. (Job.)

Perhaps no doctrine was more inimical to poetry than

that of the Manicheans who held that matter was evil. Christian poetry is free from such fetters, for such an idea is the negation of Christianity. For the Christian there is only one source and principle of all things, and evil is simply negation, the absence of reality. The Christian knows that God not only created matter but assumed it into Himself when He became Man. Here lies the secret of the Christian's love of nature. Is not the simplest bit of earth kindred substance with the flesh of God? Never did God stoop to us as in the Incarnation and never was Creator and creature so closely conjoined. The Christian poet then has reason to idealize material things. They have for him associations with the Divinity that the Pagan could not guess. Thompson sees Christ crucified in the setting sun, and Chesterton sings of the mystical secret of a donkey. In Christ not only man but, in some mysterious way, nature too has been redeemed as is hinted in the words of St. Paul: "For the expectation of the creature waiteth for the revelation of the Sons of God." "In Him all things subsist," finding somehow in Him their cohesion. And it seems that He in whom everything was created and by whom all was wonderfully restored will give at last even to the material universe a more perfect pattern and a more admirable order in Himself.

One of the things, then, which Catholic poetry will do for us is to give us Dogma and Philosophy in the most beautiful and vivid form, in the form best suited to our intellect. For our mind, unlike that of the angels, is not at home in pure thought, but we attain to truth by abstraction from material things. We can indeed utilize the dry syllogism but soon grow tired of it. The keenness and subtlety required by the philosopher is not given to many. But we are all easily convinced through the senses and imagination. And herein lies the power of poetry. It gives knowledge not in the cold syllogism, but in the startling paradox, the vivid metaphor, the glowing word, the ringing line. Our senses are now stimulated to action, the imagination glows, our whole being is awake and we learn in a flash what we might have groped after for hours.

A means such as this is a pressing need in our generation that the "Unknown God" may be made known. We are so much accustomed to have everything *delivered* to our homes —our household utensils, our light, our water supply, our

reading matter—that we are inclined to take all these things for granted and never ask where they come from or how they were made. This begets an attitude which takes everything at its face-value and never inquires into causes. The result is that those who think back to the all-enveloping First Cause are too few in our times. Even amongst Catholics the prevailing idea of God is superficial and sometimes puerile. Some regard Him, subconsciously perhaps, as the manager of a large business concern, *viz.*, His universe, and there are outside the fold those who would even criticize His methods. All this shows the need for a stock taking and a readjustment of our notions about Him "in Whom we live and move and are," and could not poetry be the vehicle to convey to our minds some small spark of light to reveal the presence and immensity of Him who dwells in the "fulness of light."

All that has been said finds a wonderful exemplification in the sublime drama of Dante, who from his dizzy summits remains the inspiration and the despair of Catholic poets. The end he set before him was to teach moral truth and thereby lead men to a better life, and ultimately to God. Dante was a great preacher and his poetry did not suffer on that account. His soul was afire with zeal to show men the beauty which had so entranced himself. We should read the "Divine Comedy" if not in the original then in a prose translation, for, as Bishop Turner well sums up, Dante "surveys and dominates the whole world, past, present, and to come, all nature, all history, all the speculations of theologians, all the reasonings of the philosophers, all the dreams of the poets, the men whom he knew, the places which he saw, the incidents of his own sad wanderings, his griefs, his joys, his hopes, his fears, his hatreds—all these formed material for his symbolism, a symbolism as definite, vivid and picturesque as that of Homer but infinitely more rich, as Goethe's but incomparably more definite. But the material was first ordered and arranged into a definite rational system. It was passed through the transmuting fire of a great love. What results is beautiful, therefore it is philosophy; it is good, therefore it is moral."

What an aid might such poetry be to reason and to Faith. How it might reveal to us, poor mortals, in a manner Wordsworth did not dream of, "the beauty that never

was on sea or land," teach something even more wonderful than that which Newman imagined about every ray of light and heat and every breath of wind being the rustling of the garments of those whose faces see God, teach us what Thompson discovered and told us none other could:

Amen! Amen! For oh, how could it be,
When I with winged feet had run
Through all the windy earth about,
Quested its secret of the sun,
And heard what things the stars together shout—
I should not heed thereat
Consenting counsel won—
By this O Singer, know we if thou see.
When men shall say to thee: Lo! Christ is here,
When men shall say to thee: Lo! Christ is there,
Believe them: yea and this—Then art thou seer
When all thy crying clear
Is but: Lo! here, Lo, there—Ah, me, Lo! everywhere.

Lots of Jobs

ANONYMOUS

This moving human document is reprinted from the Catholic Worker *(New York), March. 1934.*

I WAS thirteen when I started to work. I didn't want to go to school anyway, and my father and brothers were working in the mines and they thought I might as well be working too.

My father and mother were Lithuanians and were living down below Wilkes-Barre in a little mining town. I was born in a company shack and the shacks were awful. There were so many of them and they were just made of boards, and to keep warm you had to line them with newspapers.

Well, I went to work in a silk mill when I was thirteen, and pretty soon after a few months or so, I got sick and had to go to the hospital. I was in the hospital two months. And then I did housework for a doctor's wife and then for another family.

I didn't go home after that. I worked in another silk mill for a few years, and I held lots of other jobs. I even worked in a saloon in Scranton. That was when I was seventeen.

Then I came up to New York and worked over in Wil-

liamsburg in a factory where they made casings for sausages. We had to wear rubber boots up to our knees and big rubber aprons and tie our heads up, but the smell got into our skins. I had to take a bath every night and then it didn't help.

I worked there until my hands swelled up till they were like hams, from keeping them in the water with the chemicals all the time. I had to quit and wait until my hands got better and lay off work for a while.

So then I worked in another silk mill over in Astoria. I had four looms to tend, and I got to work at quarter of seven, and laid off at five-thirty at night. I was very fast and I earned a lot of money. I think I could make two yards of cloth in about five minutes, but I don't know for sure, since it was ten years ago and I forget.

You couldn't sit down at the job. You had to go walking around and around and around. If you stopped, the threads would break and that slowed you up. Some of the girls were slow and could only handle one loom and that meant they didn't earn much money. Some tended more looms than I did.

The pay kept going down and down and finally they laid us all off and started making plush. The factory is closed down now.

Then I worked for a drug supply house, and for the Beechnut Gum people and for the Royal Gelatine people. Making boxes. That was hard work too.

And oh yes, I was a chambermaid, and a waitress. Two of the places I worked in—a Greek place and a Polish place—they never threw anything out. They put back what was left over on the plates into the stew. I never could eat nothing.

I was thin, but not as thin as I was when I worked in the silk mill. I looked then as if I was falling apart.

And I worked, too, in a tobacco plant up in Connecticut. Hanging up tobacco on poles to dry. There were lots of children working in that place, seven, eight and nine years old. They came to work with their mothers and helped around the place, carrying baskets and running errands and helping around.

Yes, I've had lots of jobs. I can't remember how many. I wish I had a job again.